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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,345	11/21/2003	Thomas Fuehrer	10191/3480	3298

26646 7590 05/11/2007

KENYON & KENYON LLP
ONE BROADWAY
NEW YORK, NY 10004

EXAMINER	
MUI, GARY	

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
05/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/719,345	FUEHRER, THOMAS	
	Examiner	Art Unit	
	Gary Mui	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 November 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to because figure 1 does not have a descriptive legend for each component. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations

indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Claim Rejections - 35 USC § 112

4. Claims 3 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claim 3 line 5, the occurrence of "with integral N>2and integral M and N/2<M<N" is vague and indefinite because it is unclear what the applicant is claiming. Similar problem exists for claim 10.

Note

5. For claims 1 and 11, the phrase "may be" is not a positive claim limitation. Therefore, the limitation following the phrase is not considered the claimed invention. It is suggested to the applicant to remove the phrase.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1 are rejected under 35 U.S.C. 102(e) as being anticipated by Semple et al. (US 6,621,830 B1).

For claim 1, Semple et al. teaches transmitting messages in transmission time slots at a preselected transmission rate, a transmission rate within a transmission time slot being changeable in such a way that a message provided for the transmission time slot may be transmitted repeatedly within the transmission time slot (see paragraphs 1 and 2 lines 58 – 67 and 1 – 5, respectively; transmission of cells at a predetermined rate and it also has other data rates to select from).

For claim 4, Semple et al. teaches unambiguously allocating the messages to transmission time slots (see column 2 lines 35 – 41).

For claim 5, Semple et al. teaches multiplying the transmission rate within a transmission time slot by an integral factor (see column 2 lines 19 – 26).

For claim 11, Semple et al. teaches a first means for transmitting messages in transmission time slots at a preselected transmission rate; and second means for changing a transmission rate within a transmission time slot in such a way that a message provided for the transmission time slot may be transmitted repeatedly within the transmission time slot (see paragraphs 1 and 2 lines 58 – 67 and 1 – 5, respectively; transmission of cells at a predetermined rate and it also has other data rates to select from).

For claim 12, Semple et al. teaches a third means for unambiguously allocating the messages to transmission time slots (see column 2 lines 35 – 41).

For claim 14, Semple et al. teaches a first means for transmitting messages in transmission time slots at a preselected transmission rate; and second means for changing a transmission rate within a transmission time slot in such a way that a message provided for the transmission time slot may be transmitted repeatedly within the transmission time slot (see paragraphs 1 and 2 lines 58 – 67 and 1 – 5, respectively; transmission of cells at a predetermined rate and it also has other data rates to select from).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Semple et al. in view of Kage (US 4,709,376).

For claim 2, Semple et al. teaches all of the claimed subject matter with the exception of comparing at least two of the messages transmitted repeatedly within a transmission time slot

with one another; and detecting a fault in the event of deviations with regard to at least one of the identification and the data. Kage from the same field of endeavor teaches that the data stored in the store are read out and applied to a majority circuit which then checks the bits of the patterns A_1, A_2,...A_M each representative of the same information and, by majority, decides a single pattern $D=d^1\ d^2...d^k$. For example, d^k is the result of checking a_1^k, a_1^k,... a_{m-}^K for majority; if the number of ONEs is greater than that of ZEROs, d_k =ONE (see column 4 lines 28 – 35, the bits are compared with each other and determined to find the correct pattern). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to processed the received signals as taught by Kage into the bus system of Semple et al. The motivation for doing this is to more reliable bus system.

For claim 3, Semple et al. teaches all of the claimed subject matter with the exception that N of the messages transmitted repeatedly within a transmission time slot are compared with one another, and, within the scope of an M out of N deviation with regard to at least parts of the messages, at least one message is detected as being faulty, the messages detected as faulty being rejected (see column 4 lines 28 – 35, the bits are compared with each other and determined to find the correct pattern). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to processed the received signals as taught by Kage into the bus system of Semple et al. The motivation for doing this is to more reliable bus system.

For claim 8, Semple et al. teaches all of the claimed subject matter with the exception the messages contain an identification and data, the identification identifying data content, and the messages transmitted repeatedly within a transmission time slot are identical at least with

regard to the identification and the data. Kage from the same field of endeavor teaches there is provided an apparatus for processing a digital received signal in which the same information appears repeatedly (see column 1 lines 52 – 55, the same data is transmitted). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to sending identical messages a taught by Kage into Semple's bus system. The motivation for doing this is to have lower error rates.

For claim 9, Semple et al. teaches all of the claimed subject matter with the exception of comparing at least two of the messages transmitted repeatedly within a transmission time slot with one another; and detecting a fault in the event of deviations with regard to at least one of the identification and the data. Kage from the same field of endeavor teaches that the data stored in the store are read out and applied to a majority circuit which then checks the bits of the patterns A_1, A_2,... A_M each representative of the same information and, by majority, decides a single pattern $D=d^1 d^2 \ldots d^k$. For example, d^k is the result of checking a_1^k, a_1^k,... a_{m-}^K for majority; if the number of ONEs is greater than that of ZEROs, d_k =ONE (see column 4 lines 28 – 35, the bits are compared with each other and determined to find the correct pattern). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to processed the received signals as taught by Kage into the bus system of Semple et al. The motivation for doing this is to more reliable bus system.

For claim 10, Semple et al. teaches all of the claimed subject matter with the exception that N of the messages transmitted repeatedly within a transmission time slot are compared with one another, and, within the scope of an M out of N deviation with regard to at least parts of the messages, at least one message is detected as being faulty, the messages detected as faulty

being rejected (see column 4 lines 28 – 35, the bits are compared with each other and determined to find the correct pattern). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to processed the received signals as taught by Kage into the bus system of Semple et al. The motivation for doing this is to more reliable bus system.

For claim 13, Semple et al. teaches all of the claimed subject matter with the exception of a memory device for storing the messages transmitted repeatedly within a particular transmission time slot in a chronological order of their transmission. Kage from the same field of endeavor teaches a store for storing the M information patterns which are received by the information pattern receive circuit (see column 1 lines 60 – 62). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to processed the received signals as taught by Kage into the bus system of Semple et al. The motivation for doing this is to have a more efficient system.

Claim Rejections - 35 USC § 103

11. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Semple et al. in view of Strong (US 2002/0126691).

For claim 6 and 7, Semple et al. teaches all of the claimed subject matter with the exception of structuring the message in such a way that a beginning and an end of the message are unambiguously detectable and that each of the messages has a first identifier for the beginning of the message and a second identifier for the end of the message. Strong from the same field of endeavor teaches a data frame has a start of frame and an end of frame (see paragraph 0040

lines 1 – 5 and paragraph 0051 lines 1 – 4, see figure 4 Start of frame and End of frame). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to structure the messages a taught by Strong to be used in Semple's bus system. The motivation for doing this is to have a more accurate system.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hamaki (US 5,745,487), Weigl et al. (US 7,075,898 B2), Weighl et al (US 7,171,579 B2), Amouris (US 2002/0001294 A1), Kurokawa et al. (US 2003/0043840 A1), Schuermans et al. (US 2006/0104371 A1), and Laroia et al. (US 2006/0153130 A1) are cited to show a method and device for transmitting data in messages on a bus system.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary Mui whose telephone number is (571) 270-1420. The examiner can normally be reached on Mon. - Thurs. 9 - 3 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GM 05.08.2007

RICKY Q. NGO
SUPERVISORY PATENT EXAMINER